Writing an Independent Investigator Proposal for the ALS:

Guidelines from the Proposal Review Study Panel

The ALS Proposal Study Panel (PSP) applies five main criteria in evaluating proposals:

- Suitability for the ALS and the beamline requested
- Scientific motivation
- Goals and scope of the proposal
- Proposed experimental method
- Feasibility of the experiment; accomplishments with previous beamtime at the ALS

Suitability for the ALS and the beamline requested

The ALS is a high-brightness facility. Proposals for undulator beamlines must address the need of high brightness, including spot size, spectral resolution, and flux requirements. The proposal should also be consistent with the performance of the requested beamline. Information about beamlines can be obtained on the Web (www-als.lbl.gov/als/als_users_bl/bl_table.html), from the Advanced Light Source Compendium of User Abstracts and Technical Reports, and from discussions with the ALS beamline scientist.

Scientific motivation

All members of the ALS Proposal Study Panel are not specialists in the field of the research proposed; thus, what seems obvious to the proposer might be worth stating clearly. The discussion of motivation can be brief, but should address the proposed research specifically, for example:

> "The conductivity of thin-oxide films is not understood and cannot be explained by standard theories. We plan to measure the electronic structure of some of these materials by using angle-resolved photoemission."

Avoid statements that are too general, for example:

> "We plan to measure the electronic structure of thin-oxide films to advance materials science."

Goals and scope of the proposal

It is important that realistic goals for the proposed beamtime be clearly stated and that the amount of beamtime requested is consistent with these goals. It is not necessary to inflate the amount of beamtime required for an experiment.

Proposed experimental method

Details of the experimental method should be provided, along with a discussion of the endstation to be used. Please state whether the endstation is already in place, in use elsewhere, in the design phase, or under construction.

Feasibility of the experiment; accomplishments with previous beamtime at the ALS

A discussion or demonstration of the feasibility of the experiment can include and estimate of signal rate and noise, references to previous work elsewhere, and/or sample spectra. It is especially important to include, if applicable, a discussion of accomplishments with previous ALS beamtime.

Additional Guidelines

Consolidation of Proposals

To speed up the proposal submission and review process, consider consolidating several experiment proposals into one or two detailed proposals.